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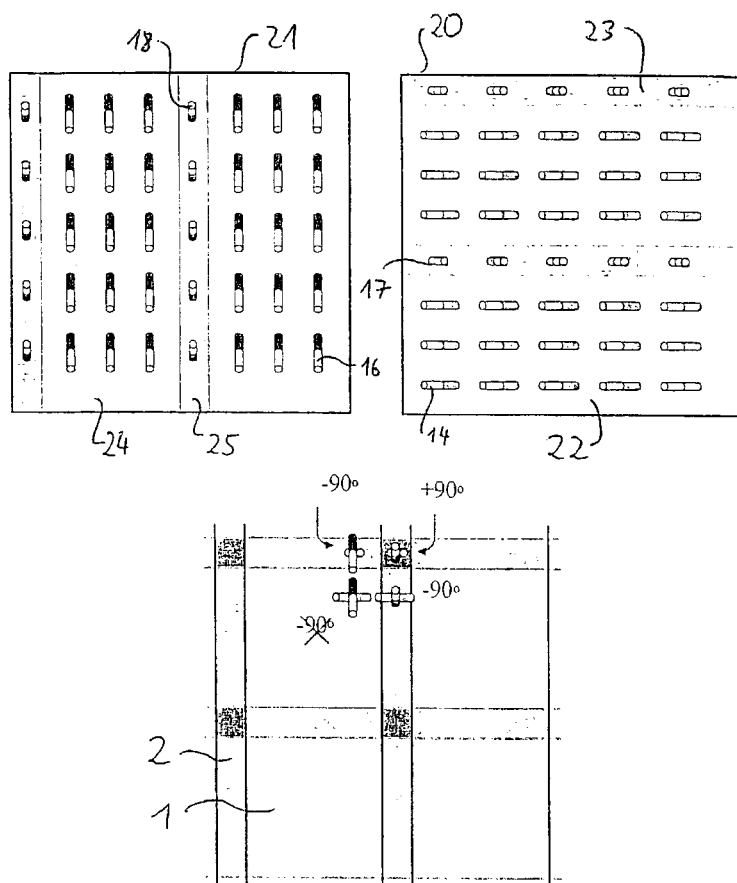
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(54) Title: NEMATIC LIQUID CRYSTAL ELECTROOPTICAL ELEMENT AND DEVICE



(57) Abstract: A liquid crystal electrooptical element comprises a pair of substrates (20, 21) positioned between a pair of polarising plates, electrodes defining pixel areas (1) and alignment layers disposed on the respective opposing inside surfaces of said substrates (20, 21) and a chiral nematic liquid crystal sandwiched between said pair of surfaces. At least one of the alignment layers is patterned in such a way that the azimuth or pretilt or both alignment directions (14 to 17, 16 to 18) are different at the substrate interfaces suppressing the growth of the ground state of the liquid crystal. When an initial electrical pulse is applied, one of the at least two bistable states is reached, wherein the contrast ratio between said bistable states is two or greater. A device with these elements is long-term bistable and does not require electronic refreshing as long as the displayed information is not changed. Therefore, the power consumption of this bistable device is minimal.

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